

6.2 Northern Shrub and Graminoid Fens

Alnus incana - *Salix* spp. - *Betula pumila* / *Chamaedaphne calyculata* Shrubland (Bog Birch - Willow Shore Fen)

COMMON NAME	Speckled Alder - Willow species - Bog Birch / Leatherleaf Shrubland
SYNONYM	Bog Birch - Willow Shore Fen
PHYSIOGNOMIC CLASS	Shrubland (III)
PHYSIOGNOMIC SUBCLASS	Deciduous shrubland (III.B)
PHYSIOGNOMIC GROUP	Cold-deciduous shrubland (III.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (III.B.2.N)
FORMATION	Saturated cold-deciduous shrubland (III.B.2.N.g)
ALLIANCE	BETULA PUMILA - (SALIX SPP.) SATURATED SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM PALUSTRINE

RANGE

Voyageurs National Park

This type is found primarily in the northern part in association with peatland areas.

Globally

This association is found in northern Minnesota and Ontario and may be in Wisconsin and Michigan.

ENVIRONMENTAL DESCRIPTION

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This type is most commonly found along the minerotrophic margins of confined basin peatlands, associated with peatland lake shore complexes or as part of large peatlands. The substrate is deep fibric, *Sphagnum* peat. The water regime is saturated or, rarely, seasonally flooded. Hummock and hollow microtopography is well developed.

Globally

This type is most commonly found along the minerotrophic margins of confined basin peatlands, associated with peatland lakeshore complexes or on "lagg" zones at edges of peatlands where periodic exposure to flooding occurs from groundwater runoff. The substrate is deep fibric to mesic peat. The water regime is saturated to seasonally flooded. Hummock and hollow microtopography is well developed (Harris *et al.* 1996).

MOST ABUNDANT SPECIES

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<u>Stratum</u>	<u>Species</u>
Tall shrub	<i>Betula pumila</i> , <i>Alnus incana</i> , <i>Salix</i> spp.
Short shrub	<i>Chamaedaphne calyculata</i>
Forb	<i>Maianthemum trifolium</i>
Graminoid	<i>Carex lacustris</i> , <i>Carex trisperma</i>
Nonvascular	<i>Sphagnum</i> spp.

Globally

Tall shrub	<i>Betula pumila</i> , <i>Alnus incana</i> , <i>Salix</i> spp.
Short shrub	<i>Chamaedaphne calyculata</i>
Forb	<i>Maianthemum trifolium</i>
Graminoid	<i>Carex lacustris</i> , <i>Carex trisperma</i>
Nonvascular	<i>Sphagnum</i> spp.

CHARACTERISTIC SPECIES

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Betula pumila, *Alnus incana*, *Salix* spp.

Globally

USGS-NPS Vegetation Mapping Program
Voyageurs National Park

Betula pumila, *Alnus incana*, *Salix* spp.

VEGETATION DESCRIPTION

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The shrub layer of this type is dominated by *Betula pumila*; however, *Alnus incana*, *Salix pyrifolia*, *Salix pedicellaris*, and *Salix petiolaris* are also commonly present, usually at lower cover. Shrubs are usually under 2m tall and coverage ranges from 30-90%. *Chamaedaphne calyculata* dominates the dwarf-shrub layer, with lesser amounts of *Ledum groenlandicum*, *Andromeda polifolia*, and *Kalmia polifolia* present at low cover or absent. Cover of these dwarf-shrubs is typically 70-90%. Often being shaded out by this dense dwarf-shrub layer, the cover of herbaceous plants is generally low (5-30%). The most abundant species are *Carex lacustris*, *Carex trisperma*, and *Maianthemum trifolium*. *Potentilla palustris*, *Calamagrostis canadensis*, *Carex chordorrhiza*, and *Eriophorum vaginatum* are also common at low density. The nonvascular strata is dominated by *Sphagnum magellanicum*, *Sphagnum angustifolium*, *Sphagnum centrale*, *Sphagnum girgensohnii*, and *Sphagnum fallax*. These species typically comprise 90-100% cover.

Globally

The shrub layer of this type is dominated by *Betula pumila*, with *Alnus incana* and *Salix* spp codominants (including *Salix pyrifolia*, *Salix planifolia*, *Salix pedicellaris*, and *Salix petiolaris*). Other less constant tall shrubs include *Cornus stolonifera* and *Rhamnus alnifolia*. Shrubs are typically 1.5 to 3 m tall and coverage ranges from 30-80%. *Chamaedaphne calyculata* dominates the dwarf-shrub layer, with lesser amounts of *Ledum groenlandicum*, *Andromeda polifolia*, *Kalmia polifolia*, *Rubus acaulis*, *Rubus idaeus* and *Rubus pubescens*. Cover of these dwarf-shrubs is typically 60-90%. The herbaceous layer is often shaded out by the dense dwarf-shrubs, and their cover is variable (20-60%). The most abundant species are *Carex lacustris*, *Carex leptalea*, *Carex rostrata*, *Carex trisperma*, *Maianthemum trifolium* and *Potentilla palustris*. Common, but less abundant, species include *Calamagrostis canadensis*, *Carex chordorrhiza*, *Carex lasiocarpa*, *Eriophorum vaginatum* and *Viola* spp. The nonvascular strata in northern Minnesota is dominated by *Sphagnum magellanicum*, *Sphagnum angustifolium*, *Sphagnum centrale*, *Sphagnum girgensohnii*, and *Sphagnum fallax*. These species typically comprise 90-100% cover (Harris *et al.* 1996, M. Smith personal communication 1999).

CONSERVATION RANK G?

DATABASE CODE CEGLO05227

COMMENTS

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Diagnostic features of the type include the shrubland dominated by *Betula pumila*, with *Alnus incana* and *Salix* spp. consistent at low cover. An ericaceous dwarf-shrub mix is usually present. When *Alnus incana* or *Salix* spp. increase in cover, this community can grade into the Speckled Alder Swamp (CEGL002381) and the Dogwood-Pussy Willow Swamp (CEGL002186). This occurs most commonly in shoreline situations. When alder, willow and bog birch all are present with equal cover, the stand is still considered a Bog Birch-Willow Shore Fen since mixed dominance is typical for this community. When alder or willow reach dominance (perhaps greater than 60% relative cover) the stand should be classified into either of those types. This type is analogous to Ontario's W16 (Harris *et al.* 1996).

REFERENCES

Harris, A. G., S. C. McMurray, P. W. C. Uhlig, J. K. Jeglum, R. F. Foster, and G. D. Racey. 1996. Field guide to the wetland ecosystem classification for northwestern Ontario. Ont. Minist. Nat. Resour. Northwest Sci. Tech. Field Guide FG-01. Thunder Bay, Ont. 74 p.